

Vatsa Patel

Software Systems Engineer | Masters in CS student

 San Francisco Bay Area
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 /VatsaPatel

Experience

3D RoomSpace | Software Engineering Intern

Los Angeles, CA • May 2020 - Aug 2020

- Rearchitected and migrated independent services to a scalable Kubernetes environment.
- Developed the core services for the rental platform to automate leasing and easily secure medium-term rentals.

Tech Stack: GCP Cloud run, Google Kubernetes Engine | Node, GraphQL | React Native, React, Gatsby

Freelance Contractor

San Francisco, CA • May 2020 - Present

- **PodSource, SF:** Helped move to a scalable serverless architecture reducing monthly bills by 72%.
- Built a tool to automatically tag and push docker images to multiple Container Registries with multiple login management integrating with their internal system.
- **Wetherbees Unofficial:** Migrated their firebase SDK based backend to DynamoDB and developed GraphQL endpoints.

A D Patel Institute of Technology | Software Engineer

Learning Management Platform

Aug 2017 - Sept 2018

- Engineered highly-available backend services that are architected to scale even on low-end hardware.
- Deployed an in-house private Cloud cluster using OpenStack that can scale-up or scale-down based on load also providing IaaS for other student projects.
- Created a custom network authentication service integrating with internal IAM and auto-assigning bandwidth and QoS based on access level.

Tech Stack: React, React Native, Electron | NodeJS, Golang | MemSQL, HBase, Aerospike.

ADIT Alumni Hub

Aug 2016 - Mar 2018

- Designed & Developed a social platform from scratch to allow Alumni's to reconnect with each other, discover other alumni's in same region and profession, share jobs & events. Attained 6,400 users within first 3 months.

Tech Stack: React, JQuery | PHP, NodeJS | MySQL, Memcached

Smarq Technologies | Founded a Smart Home startup

Nov 2015 - May 2016

- Ideated a startup at Qualcomm incubator which was selected in the top-10 startup ideas out of thousands of applicants.
- Smarq: tightly-knit ecosystem of smart sensors capable of automation sequences based on local location of user.

Purva Couture | Software Developer

Aug 2015 - Dec 2015

- Single-handedly developed a Business Operations system that managed from Sales to Production to Deliveries handling 700+ clients & revenue of \$1M+.

Projects

SlackHR

Feb 2020 - May 2020

- Developed a Slack plugin application that helps combat abusive conduct at a workplace backed by a Multi-Label classifier using Neural Net. **Currently used at IBM research team's Slack.**

Reverse proxy to increase downlink bandwidth

Aug 2019 - Sep 2019

- Developing a reverse proxy that substantially minimizes the effect of Bandwidth Delay Product on TCP Throughput by buffering the file on multiple connections.
- Preliminarily achieved 8x improvement in streaming on intercontinental bandwidth with BBR congestion control.

Federated Learning - Privacy Enhanced Collaborative Machine Learning

Jan 2019 - Aug 2019

- Optimized Federated Averaging Algorithm optimized for Large-Scale LSTM-CNN when the input consists of large number of small-sized updates in Homomorphic Encryption.
- Submitted and got invited to present my research paper in IEEE.

Skills

DevOps: AWS, GCP, Docker, Kubernetes, CI/CD, OpenStack, pfSense.

Backend: NodeJS, PHP, Python, Java, C++

Database: SQL : MySQL, Postgres | NoSQL : MongoDB, Redis, DynamoDB

Frontend: JavaScript: React, React-Native

Education

San José State University

Jan 2020 - Dec 2021 Expected

Candidate for Masters in Computer Science

Dual Specialization: Networking Software & Enterprise Software Technologies

Gujarat Technological University

Jul 2015 - Jul 2019

Bachelor of Engineering in Computer Science